



Homeland Security & Critical Infrastructures

IMSS **INTEGRATED MOBILE SECURITY SYSTEM**

IMSS is a Selex ES solution that provides enhanced situational awareness in a mobile and rapidly deployable system. Based on full featured vehicles the solution offers a complete operational control room inside the vehicle and can integrate both existing and innovative sensor technologies.

Thanks to an integrated communications platform and flexible systems framework, IMSS delivers real time analysis for effective operations coordination and support in law enforcement, homeland security, CNI and civil protection and major events.

A close monitoring and control during any kind of event and a continuous communication with a central control room, improves intervention coordination and maximize the effectiveness of the operation.

In the same way, a fast intervention within hours and even minutes may drastically reduce the impact of an emergency.

Within this context, IMSS has been designed to provide Blue forces with increased situational awareness, by integrating advanced technologies and sensors, with an operational control room inside the vehicle itself.

Modular and designed for a rapid configuration according to user requirements MSS can be deployed in any scenario:

- Homeland security and CNI Protection
- Border Control
- Major events
- Law enforcement
- Emergency support.

FUNCTIONS

- Sensing and control: IMSS can monitor cross-border and protected areas through an innovative surveillance system consisting of numerous sensors that allow operators to achieve a full situational awareness. In addition, Specific video analytics algorithms detect anomalies, such as abandoned objects, over-crowding and suspicious behaviour
- Communication: IMSS guarantees the flow of messages and information between on-field-sensors, the vehicle and the central control room. Through the operative network operators can communicate, exchange data and perform their operational activities, while moving
- Enforce Checkpoint Control: using the mobile number-plate recognition software, IMSS can control gateways where vehicles enter or exist, and enforce identification and anti-theft actions
- Supervision and coordination: the integrated communication with the central command allows IMSS to perform immediate intervention
- Data collection, since Information collected from the different sensors in the area is rapidly interpreted, displayed on the local computer and shared with the remote control room. The IMSS can also be used as a central communications network platform for distributing messages and interface with other public or private networks.

TECHNICAL FEATURES

The ability to integrate heterogeneous technologies makes the IMSS an autonomous mobile communication node capable to gather and forward information among:

- Different sub-systems and sensors in the field
- Different hierarchical levels of a command chain
- Different operating forces (multi-agency operations).

Broadband communication - required to support video operations - is supplied via Wi-Fi meshed network. In order to effectively manage the limited length of WiFi paths, seven easily transportable trolleys each housing a WiFi mesh router and suitable antennas, are used to create multi-hop paths connecting the IMSS to zones where broadband communication support is needed. This typically occurs when video feeds are required from zones that cannot be reached by the vehicle.

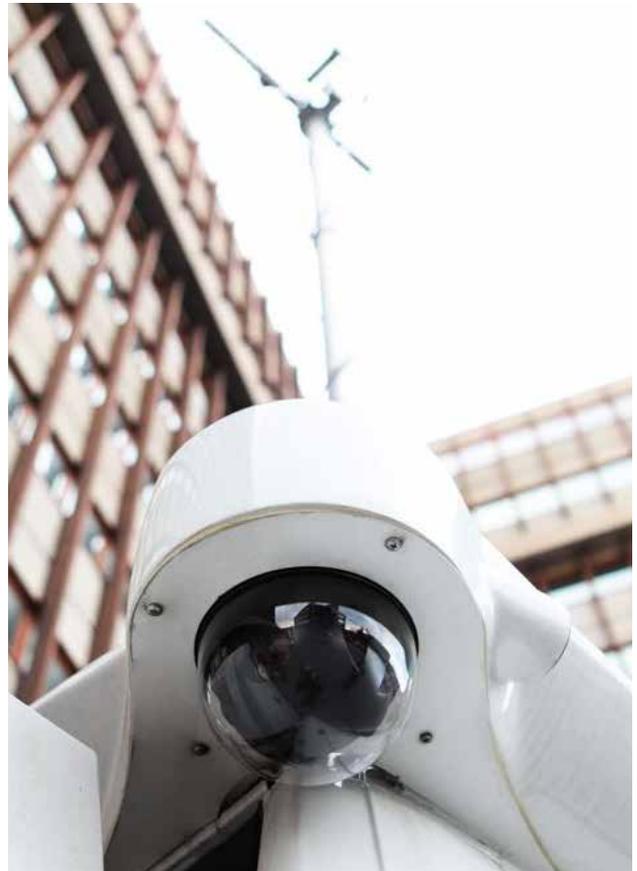
IMSS also provides a full integration platform which allows for local C2 (Command and Control) analysis before distributing messages to the remote Command centre, via a satellite link. This feature makes the IMSS an ideal solution for operations in remote or critical areas, where it can support the local coordination and its connection with a remote control room.





Local Connectivity

- A compact TETRA mobile-radio system, with a “single cell” radio base station providing the coverage for the 15 TETRA Hand Held Radios to be used by blue forces on the field
- A compact LTE system providing broadband coverage and professional features thanks to Selex ES Core Packet Network
- A PERSEUS CSP system to perform multi-technology integration
- A Wi-Fi meshed 802.11b/g access network, providing IP data transport to all data sub-systems and sensors deployed on the field
- A WiNN Mobile device (multi technology data router) enabling the fully integration of different communication technologies including GSM, GPRS, TETRA or Analog bearers.



Remote Connectivity

- IMSS is supplied with a satellite communication system to forward information to a remote C2 system accordingly to the command chain and configurable on the basis of users needs
- The system is a SCPC system with an outdoor unit (ODU) with a 1.5m wide parabolic antenna in the Ku Band and an indoor unit (IDU) for satellite routing
- The antenna positioning mechanism is powered and controlled by an Antenna Satellite Controller (ACU) using GPS.



Security and Control Room Features

- Integrated Security Systems and Solutions (S3I) for the implementation of highly integrated and geographically distributed physical security
- Automated Car plate reader to automatically control the number plate for security checking (stolen or wanted vehicles). The system uses the fixed LPR cameras installed in the IMSS
- 3 Dome cameras installed on the Van roof useful to acquire audio and video signals from the operational area.

Power and ancillaries subsystem

- 2 petrol fuelled generators to make IMSS totally autonomous for the power supply
- An external power supply socket for complete operational autonomy
- Hydraulic stiffening for the suspension to stabilize the vehicle and 2 additional stabilization Legs
- The Power subsystem is PLC controlled and able to be connected to an external power source (grid).

KEY POINTS

- Complete integrated system encompassing infrastructures, terminals and control room all available in one or more networked vehicles
- Ability to correlate heterogeneous data and events in order to reduce false alarms, provide high level alerts, and enhance real-time global situational awareness; thanks to location services and geo-referenced GUI (Graphical User Interface)
- Quickly treatment o threats and unexpected events through the rapid deployment of the entire system: the IMSS full set-up time is less than 15 minutes.

